AF

DOCKET NO. WEST14-00015 **PATENT**
Customer No. 23990

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of	:	Paul F. Struhsaker, et al.
Serial No.	:	09/839,729
Filed	:	April 20, 2001
For	:	APPARATUS AND METHOD FOR OPERATING A SUBSCRIBER INTERFACE IN A FIXED WIRELESS SYSTEM
Group No.	:	2617
Examiner	:	H.Q. Phan

MAIL STOP APPEAL BRIEF - PATENTS
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

APPELLANTS' BRIEF ON APPEAL

This Brief is submitted on behalf of Appellant for the application identified above. A check for the $250.00 fee for filing a brief on appeal is enclosed. Please charge any additional necessary fees to Deposit Account No. 50-0208.

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REAL PARTY IN INTEREST

The real party in interest for this appeal is the assignee of the application, ACCESS SOLUTIONS, LTD.

RELATED APPEALS AND INTERFERENCES

None – there are no appeals or interferences that will directly affect, be directly affected by, or have a bearing on the Board's decision in this pending appeal.

STATUS OF CLAIMS

Claims 1–20 are pending in the present application. Claims 1–2, 4, 8–10, 12–14, 18 and 20 were rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,606,341 to *Kanterakis et al.* Claims 3, 11, 15 and 19 were rejected under 35 U.S.C. § 103(a) as being unpatentable over *Kanterakis et al* in view of U.S. Patent No. 5,812,951 to *Ganesan et al.* Claims 5–7 were rejected under 35 U.S.C. § 103(a) as being unpatentable over *Kanterakis et al* in view of U.S. Patent No. 5,283,780 to *Schuchman et al.* Claims 16–17 were rejected under 35 U.S.C. § 103(a) as being unpatentable over *Kanterakis et al* in view of *Ganesan et al* and further in view of U.S. Patent No. 4,932,070 to *Waters et al.* The rejections of claims 1–20 under 35 U.S.C. §§ 102 and 103 are appealed.

STATUS OF AMENDMENTS

No amendment to the claims was filed following the final Office Action mailed March 28, 2006.

SUMMARY OF THE CLAIMED SUBJECT MATTER

The following summary refers to disclosed embodiments and their advantages but does not delimit any of the claimed inventions.

Support for Independent Claims:

Per 37 C.F.R. § 41.37, only support for the independent claims is discussed herein. The discussion of the claims in this section is for illustrative purposes and is not intended to affect the scope of the claims.

In the embodiment to which independent claim 1 is directed, an apparatus includes a first demodulator 303, 304 coupled to receive bursts of the first burst data signal 204 and performing demodulation operations upon the bursts, and a controller 316 coupled to and controlling the first demodulator to cause cyclo-stationary filtering of successive bursts sub3...sub1 and subN...sub1 of the first burst data signal. Specification, Figures 2-4; page 27, line 10 through page 28, line 3; page 28, line 6 through page 30, line 8; page 30, line 21 through page 31, line 3; and page 31, line 20 through page 32, line 18.

The embodiment to which independent claim 13 is directed includes the same features as independent claim 1, together with a plurality of subscriber stations and further specifying that the first demodulator and the controller are part of a communication station for transmitting and receiving signals to and from the subscriber stations. Specification, Figures 1-4; page 27, line 10

through page 28, line 3; page 28, line 6 through page 30, line 8; page 30, line 21 through page 31, line 3; and page 31, line 20 through page 32, line 18.

The embodiment to which independent claim 20 is directed is a method of cyclo-stationary processing performed by an apparatus according to either of independent claims 1 and 13. Specification, Figures 2-4; page 27, line 10 through page 28, line 3; page 28, line 6 through page 30, line 8; page 30, line 21 through page 31, line 3; and page 31, line 20 through page 32, line 18.

GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

Claims 1–2, 4, 8–10, 12–14, 18 and 20 were rejected under 35 U.S.C. § 102(e) as being anticipated by *Kanterakis et al.* Claims 3, 11, 15 and 19 were rejected under 35 U.S.C. § 103(a) as being unpatentable over *Kanterakis et al* in view of *Ganesan et al.* Claims 5–7 were rejected under 35 U.S.C. § 103(a) as being unpatentable over *Kanterakis et al* in view of *Schuchman et al.* Claims 16–17 were rejected under 35 U.S.C. § 103(a) as being unpatentable over *Kanterakis et al* in view of *Ganesan et al* and further in view of *Waters et al.*

ARGUMENT

1. The rejection of claims 1–2, 4, 8–10, 12–14, 18 and 20 under 35 U.S.C. § 102(e) as being anticipated by *Kanterakis et al.*

Claims 1–2, 4, 8–10, 12–14, 18 and 20 were rejected under 35 U.S.C. § 102(e) as being anticipated by *Kanterakis et al*

A claim is anticipated only if each and every element is found, either expressly or inherently described, in a single prior art reference. The identical invention must be shown in as complete detail as is contained in the claim. MPEP § 2131 at p. 2100-76 (8^{th} ed. rev. 5 August 2006).

Claims 1, 13 and 20:

Independent claims 1, 13 and 20 each recite cyclo-stationary filtering of successive bursts of a received data signal. As used in the specification, cyclo-stationary filtering refers to relying on the assumption that channel characteristics are relatively stationary across successive data bursts from a particular subscriber (i.e., change slowly relative to data burst rates) to apply equalizer weights computed for the data burst from a subscriber in one data frame to filtering of a data burst from the same subscriber within the next successive data frame, with the equalizer weights computed for the first data burst being employed to update the profile for the respective subscriber station and then used to filter a subsequent data burst from that subscriber station. Such a feature is not found in the cited reference. *Kanterakis et al* teaches using the pilot and/or preamble portions of a current data segment to determine the weights for programmable matched filter 315/415 operating on that current

data segment, not weights computed from a prior data segment. *Kanterakis et al*, column 4, lines 6–23.

The final Office Action states:

> Applicant argued that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies . . . . are not recited in the rejected claim(s).

Paper No. 060313, pages 2–3. However, independent claims 1 and 13 do, in fact, recite "cyclo-stationary filtering." Accordingly, the claims do, in fact, recite the feature(s) of applying equalizer weights computed for one data burst to filtering of a next successive data burst based on the assumption that channel characteristics are relatively stationary across successive data bursts (i.e., change slowly relative to data burst rates) by reciting "cyclo-stationary filtering." The term "cyclo-stationary filtering" is expressly defined in the specification:

> Cyclo-stationary adaptive filtering (CSAF) is performed upon the uplink data burst signal. CSAF is a signal processing technique to allow adaptive filters to operate in environments that exhibit cyclic/deterministic channel environments. Each burst of the data signal transmitted by a subscriber station forms a separate and distinct stationary channel environment. Each of the channels is processed by configuring the receive portion of the base station with a matched filter forming the equalizer, such as equalizers 303 and 305 (shown in FIGURE 3) for the specific channel. The values forming the profiles stored at the memory device of the controller are used to weight the equalizer, as appropriate.

Specification, page 32, lines 7-18. The Examiner has not identified any evidence for concluding that "cyclo-stationary filtering" has a meaning differing from the meaning ascribed to that term in the specification. Accordingly, the Examiner has no basis for adopting any interpretation of the term

"cyclo-stationary filtering" that is contrary to the meaning ascribed to that term in the specification, and adoption of such a contrary interpretation is arbitrary and capricious.

Kanterakis et al does not use the term "cyclo-stationary filtering." Nor does *Kanterakis et al* describe applying equalizer weights computed for a data burst from a particular subscriber to filtering of a next successive data burst from that subscriber based on the assumption that channel characteristics are relatively stationary across successive data bursts.

Claim 4:

Claim 4 recites that the first channel upon which the first burst data signal is transmitted is characterized by at least a first channel-related parameter, and the cyclo-stationary filtering is performed upon the first channel-related parameter. Such a feature is not found in the cited reference. The cited portion of *Kanterakis et al* relates to transmit power control:

> The controller 319 has control links coupled to the analog-to-digital converter 314, programmable-matched filter 315, preamble processor 316, the digital-to-analog converter 328, the spreading sequence generator 327, the variable gain device 325, the packet formatter 324, the de-interleaver 320, the FEC decoder 321, the interleaver 323 and the FEC encoder 322.
>
> . . . .
>
> The access-burst signal of FIG. 12 comprises a plurality of RS-preamble signals, RS-power-control signals, and RS-pilot signals, respectively, transmitted in time, at increasing power levels. The power from RS-preamble signal to RS-preamble signal increases according to the power values P_0, P_1, P_2 . . . . The power values increase according to their index, that is, $P_0 < P_1 < P_2$, ... The combined plurality of RS-preamble signals, RS-power-control signals, and RS-pilot signals, makeup part of, or all of, the access-burst signal. The power level of the RS-power-control signal and the RS-pilot signal may be at a proportion of the power level of the RS-preamble signal.

> The plurality of RS-preamble signals, RS-power-control signals, and RS-pilot signals is followed in time by a data. Thus, the access-burst signal also may include a data part. Alternatively, the access-burst signal may include the plurality of RS-preamble signals, RS-power-control signals, and RS-pilot signals, and the data are considered concatenated to the access-burst signal. The data may include message information, or other information such as signaling, etc. The data preferably are concatenated to, or are part of, the access-burst signal, but may be sent separately from the access-burst signal.
>
> As shown in FIG. 12, an RS-power-control signal, which is a time portion of the access-burst signal, is transmitted first in time during the time interval between RS preamble signal to RS preamble signal. The RS-preamble signal is a time portion of the access-burst signal, as shown in FIG. 12. An RS-pilot signal is-transmitted second in time during the time interval between RS-preamble signal to RS-preamble signal.

Kanterakis et al, column 3, line 66 through column 4, line 5, column 12, lines 12-43. Transmit power is not a channel-related parameter, but is instead a transmit parameter.

Claim 8:

Claim 8 recites that the first burst data signal is characterized by at least a first signal-related parameter and that the cyclo-stationary filtering is performed upon the first signal-related parameter. Such a feature is not found in the cited reference. The cited portion of *Kanterakis et al* relates to transmit power control:

> The controller 319 has control links coupled to the analog-to-digital converter 314, programmable-matched filter 315, preamble processor 316, the digital-to-analog converter 328, the spreading sequence generator 327, the variable gain device 325, the packet formatter 324, the de-interleaver 320, the FEC decoder 321, the interleaver 323 and the FEC encoder 322.
>
> . . . .
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> The access-burst signal of FIG. 12 comprises a plurality of RS-preamble signals, RS-power-control signals, and RS-pilot signals, respectively, transmitted in time, at increasing power levels. The power from RS-preamble signal to

> RS-preamble signal increases according to the power values P_0, P_1, P_2 . . . . The power values increase according to their index, that is, $P_0 < P_1 < P_2$, ... The combined plurality of RS-preamble signals, RS-power-control signals, and RS-pilot signals, makeup part of, or all of, the access-burst signal. The power level of the RS-power-control signal and the RS-pilot signal may be at a proportion of the power level of the RS-preamble signal.
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> The plurality of RS-preamble signals, RS-power-control signals, and RS-pilot signals is followed in time by a data. Thus, the access-burst signal also may include a data part. Alternatively, the access-burst signal may include the plurality of RS-preamble signals, RS-power-control signals, and RS-pilot signals, and the data are considered concatenated to the access-burst signal. The data may include message information, or other information such as signaling, etc. The data preferably are concatenated to, or are part of, the access-burst signal, but may be sent separately from the access-burst signal.
>
> As shown in FIG. 12, an RS-power-control signal, which is a time portion of the access-burst signal, is transmitted first in time during the time interval between RS preamble signal to RS preamble signal. The RS-preamble signal is a time portion of the access-burst signal, as shown in FIG. 12. An RS-pilot signal is-transmitted second in time during the time interval between RS-preamble signal to RS-preamble signal.
>
> The RS-power-control signal is for power control of a dedicated downlink channel. The base station transmits the dedicated downlink in response to detecting the RS-preamble signal transmitted by the remote station. The RS-pilot signal allows the base station to measure the received power from the remote station, and consequently power control the remote station using power control information transmitted from the base station to the remote station.

Kanterakis et al, column 3, line 66 through column 4, line 5, column 12, lines 12–52. Transmit power is not a (received) signal-related parameter, but is instead a transmit parameter.

Claim 9:

Claim 9 recites that the first burst data signal exhibits FEC (forward error correction) and that the cyclo-stationary filtering is performed upon an FEC-related value. Such a feature is not found in the cited reference. The cited portion of *Kanterakis et al* relates to transmit power control:

The L2 acknowledgment (L2 ACK) mechanism, which is different than the L1 ACK, is used by the base station to notify the remote station for the correctness of an uplink packet reception. The base station could either relay to the remote station which portions of the packet have being received correctly or which have being received incorrectly. There are many existing ways of implementing a particular protocol to relay this type of information. For example, the packet could be identified as consisting of a number of frames, with each frame consisting of a number of sub-frames. The frames are identified by a predetermined number. The sub-frames in each frame are also identified by a specific number. One way for the base to relay the information about the correctness of the packet is to identify all the frames and sub-frames that have been received correctly. Another way is to identify the frames and sub-frames that have been received in error. The way the base station could identify the correctness of a frame or sub-frame is by checking its cyclic residue code (CRC) field. Other more robust mechanisms for acknowledgment may be used. For example, a negative acknowledgment may be part of the common packet channel. The base station could send a negative acknowledgment (ACK), as part of the L1 ACK, in order to force the remote station from transmitting the message part.

. . . .

The access-burst signal of FIG. 12 comprises a plurality of RS-preamble signals, RS-power-control signals, and RS-pilot signals, respectively, transmitted in time, at increasing power levels. The power from RS-preamble signal to RS-preamble signal increases according to the power values P_0, P_1, P_2 . . . . The power values increase according to their index, that is, $P_0 < P_1 < P_2$, ... The combined plurality of RS-preamble signals, RS-power-control signals, and RS-pilot signals, makeup part of, or all of, the access-burst signal. The power level of the RS-power-control signal and the RS-pilot signal may be at a proportion of the power level of the RS-preamble signal.

The plurality of RS-preamble signals, RS-power-control signals, and RS-pilot signals is followed in time by a data. Thus, the access-burst signal also may include a data part. Alternatively, the access-burst signal may include the plurality of RS-preamble signals, RS-power-control signals, and RS-pilot signals, and the data are considered concatenated to the access-burst signal. The data may include message information, or other information such as signaling, etc. The data preferably are concatenated to, or are part of, the access-burst signal, but may be sent separately from the access-burst signal.

As shown in FIG. 12, an RS-power-control signal, which is a time portion of the access-burst signal, is transmitted first in time during the time interval between RS preamble signal to RS preamble signal. The RS-preamble signal is a time portion

> of the access-burst signal, as shown in FIG. 12. An RS-pilot signal is-transmitted second in time during the time interval between RS-preamble signal to RS-preamble signal.
>
> The RS-power-control signal is for power control of a dedicated downlink channel. The base station transmits the dedicated downlink in response to detecting the RS-preamble signal transmitted by the remote station. The RS-pilot signal allows the base station to measure the received power from the remote station, and consequently power control the remote station using power control information transmitted from the base station to the remote station.

Kanterakis et al, column 10, lines 40-64, column 12, lines 12-52. A cyclic residue code (CRC) is not a forward error correction-related parameter.

Claim 18:

Claim 18 recites that the controller determines times of arrival and directions of the bursts which form the data signals. Such a feature is not found in the cited reference. The cited portion of *Kanterakis et al* states:

> Pre-Data Power Control
>
> FIG. 12 shows an alternative embodiment for the RS-access-burst signal transmitted from the remote station to the base station. The base station transmits a frame-timing signal using the broadcast common-synchronization channel. The remote station synchronizes to the broadcast common-synchronization channel and retrieves frame-timing information from the frame-timing signal. The frame-timing information includes the timing for when the remote station can transmit an access-burst signal. Using the frame-timing information, the remote station sets up a transmission timing schedule. For this embodiment, the remote station divides the frame time duration into a number of access-time slots. The duration of a time slot can be half the duration of an access slot. The remote station starts transmitting an access-burst signal at the beginning of an access-time slot. The frame-time reference of the remote station is not necessarily the same as the frame-time reference of the base station, due to propagation delays.
>
> The access-burst signal of FIG. 12 comprises a plurality of RS-preamble signals, RS-power-control signals, and RS-pilot signals, respectively, transmitted in

> time, at increasing power levels. The power from RS-preamble signal to RS-preamble signal increases according to the power values P_0, P_1, P_2 . . . . The power values increase according to their index, that is, $P_0 < P_1 < P_2$, ... The combined plurality of RS-preamble signals, RS-power-control signals, and RS-pilot signals, makeup part of, or all of, the access-burst signal. The power level of the RS-power-control signal and the RS-pilot signal may be at a proportion of the power level of the RS-preamble signal.
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> The plurality of RS-preamble signals, RS-power-control signals, and RS-pilot signals is followed in time by a data. Thus, the access-burst signal also may include a data part. Alternatively, the access-burst signal may include the plurality of RS-preamble signals, RS-power-control signals, and RS-pilot signals, and the data are considered concatenated to the access-burst signal. The data may include message information, or other information such as signaling, etc. The data preferably are concatenated to, or are part of, the access-burst signal, but may be sent separately from the access-burst signal.
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> As shown in FIG. 12, an RS-power-control signal, which is a time portion of the access-burst signal, is transmitted first in time during the time interval between RS preamble signal to RS preamble signal. The RS-preamble signal is a time portion of the access-burst signal, as shown in FIG. 12. An RS-pilot signal is-transmitted second in time during the time interval between RS-preamble signal to RS-preamble signal.
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> The RS-power-control signal is for power control of a dedicated downlink channel. The base station transmits the dedicated downlink in response to detecting the RS-preamble signal transmitted by the remote station. The RS-pilot signal allows the base station to measure the received power from the remote station, and consequently power control the remote station using power control information transmitted from the base station to the remote station.

Kanterakis et al, column 11, line 60 through column 12, line 52. No mention of times of arrival and direction (of arrival) is made in the cited portion of *Kanterakis et al.*

2. **<u>The rejection of claims 3, 11, 15 and 19 under 35 U.S.C. § 103(a) as being unpatentable over *Kanterakis et al* in view of *Ganesan et al.*</u>**

Claims 3, 11, 15 and 19 were rejected under 35 U.S.C. § 103(a) as being unpatentable over *Kanterakis et al* in view of *Ganesan et al.*

In *ex parte* examination of patent applications, the Patent Office bears the burden of establishing a *prima facie* case of obviousness. MPEP § 2142, p. 2100-125 (8th ed. rev. 5 August 2006). Absent such a *prima facie* case, the applicant is under no obligation to produce evidence of nonobviousness. *Id.*

To establish a *prima facie* case of obviousness, three basic criteria must be met: First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. *Id.*

<u>Claim 11</u>:

Claim 11 recites first and second antenna transducers providing antenna diversity, and that the cyclo-stationary filtering is performed upon antenna-combining parameters. Such a feature is not found in the cited references. The cited portion of *Ganesan et al* teaches a transmit antenna 29 and a receive antenna 30, not first and second antenna transducers providing antenna diversity.

Claim 19:

Claim 19 recites a memory storing and maintaining data signal profiles and channel profiles associated with each of the received data signals. Such a feature is not found in the cited references. The cited portion *Ganesan et al* teaches a memory block 175 for extra program storage capability, but does not suggest storing data signal profiles and/or channel profiles in that memory block 175.

3. **The rejection of claims 5–7 under 35 U.S.C. § 103(a) as being unpatentable over *Kanterakis et al* in view of *Schuchman et al.***

Claims 5–7 were rejected under 35 U.S.C. § 103(a) as being unpatentable over *Kanterakis et al* in view of *Schuchman et al.*

Claim 5 recites performing the cyclo-stationary filtering upon a fading-related parameter. Such a feature is not found in the cited references. The cited portion of *Schuchman et al* describes fading, but does not suggest performing cyclo-stationary processing – processing a data burst using parameters determined for a previous burst based on the assumption that channel characteristics are relatively stationary across successive data bursts – based upon fading.

Claim 6 recited performing the cyclo-stationary filtering upon an equalizer weighting value. Such a feature is not found in the cited references. The cited references describe equalizer weighting, but do not suggest performing cyclo-stationary processing – processing a data burst using parameters determined for a previous burst based on the assumption that channel characteristics are relatively stationary across successive data bursts – based upon equalizer weighting.

CONCLUSION

The cited references fail to depict or describe all features of the claimed invention in the appealed claims, taken alone or in combination. Therefore, the rejections under 35 U.S.C. §§ 102 and 103 are improper. Applicant respectfully requests that the Board of Appeals reverse the decision of the Examiner below rejecting pending claims 1–20 in the application.

Respectfully submitted,

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For	:	APPARATUS AND METHOD FOR OPERATING A SUBSCRIBER INTERFACE IN A FIXED WIRELESS SYSTEM
Group No.	:	2617
Examiner	:	H.Q. Phan

CLAIMS APPENDIX TO APPEAL BRIEF

1. Apparatus for a communication station operable in a wireless communication system to receive at least first burst data signals transmitted thereto upon at least a first channel by a first sending station, said apparatus comprising:

at least a first demodulator selectably coupled to receive indications of bursts of the first burst data signal, said first demodulator for performing demodulation operations upon the indications received thereat; and

a controller coupled to said first demodulator, said controller for controlling performance of the first demodulator to cause cyclo-stationary filtering of successive bursts of the first burst data signal during demodulation of the first burst data signal by said first demodulator.

2. The apparatus of Claim 1 wherein the wireless communication system comprises a fixed wireless access system, wherein said communication station comprises a base transceiver station, and wherein said first demodulator is embodied at the base transceiver station.

3. The apparatus of Claim 2 wherein said first demodulator comprises the first demodulator and at least a second demodulator.

4. The apparatus of Claim 1 wherein the first channel upon which the first burst data signal is transmitted is characterized by at least a first channel-related parameter and wherein the cyclo-stationary filtering caused by said controller to be performed is performed upon the first channel-related parameter.

5. The apparatus of Claim 4 wherein the first channel-related parameter upon which the cyclo-stationary filtering is caused to be performed by said controller comprises a fading-related parameter.

6. The apparatus of Claim 5 wherein the first demodulator comprises a first equalizer as a portion thereof and wherein the fading-related parameter upon which the cyclo-stationary filtering is caused to be performed by said controller comprises a first-equalizer weighting value.

7. The apparatus of Claim 6 wherein said controller further comprises a memory for storing and maintaining values of the first channel-related parameter.

8. The apparatus of claim 1 wherein the first burst data signal is characterized by at least a first signal-related parameter and wherein the cyclo-stationary filtering caused by said controller to be performed is performed upon the first signal-related parameter.

9. The apparatus of claim 8 wherein the first burst data signal exhibits FEC (forward error correction) and wherein the first signal-related parameter upon which the cyclo-stationary filtering is caused to be performed by said controller comprises an FEC-related value.

10. The apparatus of claim 8 wherein the first burst data signal exhibits modulation orthogonalization and wherein the first signal-related parameter upon which the cyclo-stationary filtering is caused by said controller to be performed comprises a modulation-orthogonalization value.

11. The apparatus of claim 8 wherein the communication station includes an antenna assembly formed by a first antenna transducer and at least a second antenna transducer to provide antenna diversity and wherein the first signal-related parameter upon which the cyclo-stationary filtering is caused by said controller to be performed comprises antenna-combining parameters of the antenna assembly.

12. The apparatus of claim 8 wherein the first burst data signal exhibits time-adjustments and wherein the first signal-related parameter upon which the cyclo-stationary filtering is caused by said controller to be performed comprises a time-adjustment parameter.

13. For use in a fixed wireless network an apparatus comprising:

a plurality of subscriber stations; and

a communication station for transmitting and receiving signals to and from said subscriber stations wherein said communication station further comprises:

at least one demodulator coupled to the communication station for demodulating a plurality of data signals from a plurality of subscriber stations and received by said communication station; and

a controller for processing incoming data signals and maintaining data signal profiles wherein said controller is coupled to said demodulator for controlling said at least one demodulator to cause cyclo-stationary filtering of successive bursts of one of the data signals from one of the plurality of subscriber stations during demodulation of the one data signal by said at least one demodulator.

14. The apparatus of Claim 13 wherein the wireless communication system comprises a fixed wireless access system, wherein said communication station comprises a base transceiver station.

15. The apparatus of Claim 14 wherein the at least one demodulator comprises at least two demodulators, each demodulator embodied in a separate modem at the base transceiver station.

16. The apparatus of Claim 15 wherein said base transceiver station is capable of operating two subscriber air interfaces on a burst-by-burst basis wherein each said burst comprises different data signal profiles and channel profiles.

17. The apparatus of Claim 16 wherein said first and second demodulator of said at least two demodulators alternately receive incoming data signals communicated by alternating ones of said subscriber stations.

18. The apparatus of Claim 13 wherein the data signals transmitted to the communication station by said plurality of subscriber stations are transmitted in bursts of selected time durations and wherein said controller further determines times of arrival and directions of the bursts which form the data signals.

19. The apparatus of Claim 13 wherein said controller further comprises a memory for storing and maintaining said data signal profiles and said channel profiles associated with each of the received said data signals.

20. A method for acting upon at least first burst data signals transmitted to a communication operable in a wireless communication system, the first burst data signals transmitted to the communication station upon a first channel by a first sending station, said method comprising:

selectably coupling at least a first demodulator to receive indications of burst of the first burst data signal;

controlling performance of the first demodulator to cause cyclo-stationary filtering of successive burst of the first burst data signal during demodulation of the indications of the first burst data signal.

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EVIDENCE APPENDIX TO APPEAL BRIEF

None.

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RELATED PROCEEDINGS APPENDIX TO APPEAL BRIEF

None.